

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)**

**INDIANA DEPARTMENT of ENVIRONMENTAL
MANAGEMENT
OFFICE OF AIR QUALITY
and
VIGO COUNTY AIR POLLUTION CONTROL**

**GATX Rail Corporation
4400 Maple Avenue
Terre Haute, Indiana 47804**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F167-14957-00130	
Issued by: Original Signed by George M. Needham George M. Needham, Director Vigo County Air Pollution Control	Issuance Date: August 6, 2002 Expiration Date: August 6, 2007

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and Vigo County Air Pollution Control. The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary railcar cleaning system.

Authorized individual:	J. Jay Grove
Source Address:	4400 Maple Avenue, Terre Haute, Indiana, 47804
Mailing Address:	500 West Monroe Street, Chicago, Illinois 60661-3677
SIC Code:	4741
Source Location Status:	Vigo
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

- (a) Railcar Wash Unit consisting of two (2) 1500 gallon tanks and one (1) 200 gpm pump, with a maximum capacity of cleaning 12 railcars per day (with a maximum residual volume of 5 gallons per car), exhausting to ambient.
- (b) Vacuum Pump, with a maximum capacity of 270 cfm, exhausting to stack 1.
- (c) A flare with a maximum capacity of 15 million (MM) Btu per hour, exhausting to stack 2, used to purge compressed gas, mainly ammonia and LPG.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), and Vigo County Air Pollution Control (VCAPC) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions

- (a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.
- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, and VCAPC shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.4 Enforceability [326 IAC 2-8-6]

- (a) Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, VCAPC, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.
- (b) Unless otherwise stated, all terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by VCAPC.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

The submittal by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall furnish to IDEM, OAQ, and VCAPC within a reasonable time, any information that IDEM, OAQ, and VCAPC may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, and VCAPC copies of records required to be kept by this permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]
- (c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ and VCAPC may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source’s compliance with the terms and conditions contained in this permit,

including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, and VCAPC may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an

additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

The PMP and the PMP extension notification do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, and VCAPC upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ, and VCAPC. IDEM, OAQ, and VCAPC may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or Vigo County Air Pollution Control makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or Vigo County Air Pollution Control within a reasonable time.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ and VCAPC, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

IDEM, OAM

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

VCAPC

Telephone No.: 812-462-3433
Facsimile No.: 812-462-3447

Failure to notify IDEM, OAM and VCAPC, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAM and VCAPC, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

- (f) Failure to notify IDEM, OAQ and VCAPC, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination

[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ or VCAPC determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ or VCAPC, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ or VCAPC, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ or VCAPC, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and VCAPC and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:
Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

- (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.
- (2) If IDEM, OAQ and VCAPC upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ and VCAPC takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ and VCAPC, any additional information identified as needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the emissions allowable

under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

- (5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ and VCAPC, in the notices specified in 326 IAC 2-8-15(b), (c)(1), and (d).

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance

with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, and VCAPC U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action, or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit(s) vented to the control equipment is in operation.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 emission control requirements are

applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.8 Performance Testing [326 IAC 3-6]

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ and VCAPC not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, and VCAPC, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment

and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing performed required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.12 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being

implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.14 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

- (a) The Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. This statement must be received in accordance with the compliance schedule specified in 326 IAC 2-6-3 and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

The emission statement does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.

C.15 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or VCAPC makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or VCAPC within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification

by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Vigo County Air Pollution Control
103 South Third Street
Terre Haute, Indiana 47807

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, and VCAPC on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years.

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

- (1) Railcar Wash Unit consisting of two (2) 1500 gallon tanks and one (1) 200 gpm pump, with a maximum capacity of cleaning 12 railcars per day (with a maximum residual volume of 5 gallons per car), exhausting to ambient.
 - (2) Vacuum Pump, with a maximum capacity of 270 cfm, exhausting to stack 1.
 - (3) A flare with a maximum capacity of fifteen (15) million (MM) Btu per hour, exhausting to stack 2, used to purge compressed gas, mainly ammonia and LPG.
- (The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 New source toxics control [326 IAC 2-4.1-1]

The Hazardous Air Pollutants (HAP) shall be limited to less than ten (10) tons per 12 consecutive months, rolled on a monthly basis of any single HAP and less than twenty-five (25) tons per 12 consecutive months, rolled on a monthly basis of any combination of HAPs. This limitation will make 326 IAC 2-4.1-1 and 2-7 not applicable.

D.1.2 New facilities, general reduction requirements [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6 all new facilities with potential VOC emissions in excess of 25 tons, not subject to some other part of article 8, must install BACT. In order to avoid this requirement GATX Rail Corporation is limited to less than 25 tons VOC emissions per 12 consecutive months, rolled monthly.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-16]

D.1.3 Record Keeping Requirements

- (a) To document compliance with Condition with condition D.1.1 and D.1.2, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit and the HAP emission limits established in Conditions D.1.1 and D.1.2.
 - (1) The amount of combined and each individual HAP content of each railcar washed. Records shall include purchase order, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
 - (2) The amount and VOC content of each railcar washed. Records shall include purchase order, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
 - (3) The weight percent of the combined and each individual HAP content of each railcar washed;
 - (4) The weight percent VOC content of each railcar washed;
 - (5) The total combined and each individual HAP emissions for each month;
 - (6) The total VOC emissions for each month.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.4 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 and D.1.2 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
VIGO COUNTY AIR POLLUTION CONTROL**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: GATX Rail Corporation
Source Address: 4400 Maple Avenue, Terre Haute, Indiana 47804
Mailing Address: 500 West Monroe Street, Chicago, Illinois 60661-3677
FESOP No.: 167-14957-00130

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- ☒ Annual Compliance Certification Letter
- ☐ Test Result (specify) _____
- ☐ Report (specify) _____
- ☐ Notification (specify) _____
- ☐ Affidavit (specify) _____
- ☐ Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015**

**100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

and

VIGO COUNTY AIR POLLUTION CONTROL

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: GATX Rail Corporation
Source Address: 4400 Maple Avenue, Terre Haute, Indiana 47804
Mailing Address: 500 West Monroe Street, Chicago, Illinois 60661-3677
FESOP No.: 167-14957-00130

This form consists of 2 pages

Page 1 of 2

9 This is an emergency as defined in 326 IAC 2-7-1(12)
 CThe Permittee must notify the Office of Air Quality (OAQ), and Vigo County Air Pollution Control (VCAPC) within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 CThe Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
VIGO COUNTY AIR POLLUTION CONTROL**

FESOP Quarterly Report

Source Name: GATX Rail Corporation
Source Address: 4400 Maple Ave., Terre Haute, Indiana 47804
Mailing Address: 500 West Monroe Street, Chicago, Illinois 60661-3677
FESOP No.: F167-14957-00130
Facility: Railcar Wash Unit
Limit: less than 25 tons VOC per 12 month period, rolled on a monthly basis

YEAR: _____

Volatile Organic Compounds (VOC)

Month	Column 1	Column 2	Column 1 + Column 2
	VOC This Month (tons)	VOC Previous 11 Months (tons)	VOC 12 Month Total (tons)
Month 1			
Month 2			
Month 3			

9No deviation occurred in this quarter.

9Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
VIGO COUNTY AIR POLLUTION CONTROL**

FESOP Quarterly Report

Source Name: GATX Rail Corporation
Source Address: 4400 Maple Ave., Terre Haute, Indiana 47804
Mailing Address: 500 West Monroe Street, Chicago, Illinois 60661-3677
FESOP No.: F167-14957-00130
Facility: Railcar Wash Unit
Limit: less than 25 tons combined HAP per 12 month period, rolled on a monthly basis
:

YEAR: _____

Hazardous Air Pollutants (HAP)

Month	Column 1	Column 2	Column 1 + Column 2
	HAP This Month (tons)	HAP Previous 11 Months (tons)	HAP 12 Month Total (tons)
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
VIGO COUNTY AIR POLLUTION CONTROL**

FESOP Quarterly Report

Source Name GATX Rail Corporation
Source Address: 4400 Maple Ave., Terre Haute, Indiana 47804
Mailing Address: 500 West Monroe Street, Chicago, Illinois 60661-3677
FESOP No.: F167-14957-00130
Facility: Railcar Wash Unit
Limit: each HAP individually less than 10 tons per 12 month period, rolled on a monthly basis

YEAR: _____

HAP	Column 1	Column 2	Column 1 + Column 2
	HAP This Month (tons)	HAP Previous 11 Months (tons)	HAP 12 Month Total (tons)
Dichlorobenzene			
Ethylene Glycol			
Acrylic Acid			
Toluene			
Xylenes			
Methanol			
Benzene			
Glycol Ethers			
Methyl Isobutyl Ketone			
Nitrobenzene			
Stryene			
Methyl Ethyl Ketone			
Other (specify):			
Other (specify):			
Other (specify):			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
VIGO COUNTY AIR POLLUTION CONTROL**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: GATX Rail Corporation
Source Address: 4400 Maple Avenue, Terre Haute, Indiana 47804
Mailing Address: 500 West Monroe Street, Chicago, Illinois 60661-3677
FESOP No.: 167-14957-00130

Months: _____ to _____ Year: _____

Page 1 of 2

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management
Office of Air Quality
and
Vigo County Air Pollution Control**

**Technical Support Document (TSD) for a Federally Enforceable Operating
Permit (FESOP)**

Source Background and Description

Source Name: GATX Rail Corporation
Source Location: 4400 Maple Avenue, Terre Haute, Indiana 47804
County: Vigo
SIC Code: 4741
Operation Permit No.: F167-14957-00130
Permit Reviewer: Darren Woodward

The Office of Air Quality (OAQ) and Vigo County Air Pollution Control (VCAPC) has reviewed a FESOP application from GATX Rail Corporation relating to the operation of stationary railcar cleaning system.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Railcar Wash Unit consisting of two (2) 1500 gallon tanks and one (1) 200 gpm pump, with a maximum capacity of cleaning 12 railcars per day (with a maximum residual volume of 5 gallons per car), exhausting to ambient.
- (b) Vacuum Pump, with a maximum capacity of 270 cfm, exhausting to stack 1.
- (c) A flare with a maximum capacity of 15 million (MM) Btu per hour, exhausting to stack 2, used to purge compressed gas, mainly ammonia and LPG.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

This source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) R167-14329-00130, issued on July 6, 2001.

All conditions from previous approvals were incorporated into this FESOP.

Potential emissions (PTE) are determined based on the maximum production by a facility. GATX Rail Corporation's Registration application incorrectly based the PTE on the number of employees at the facility. GATX Rail Corporation was required to obtain a FESOP due to the PTE correction and the added equipment, which combined increased the capacity from five (5) cars per day to twelve (12) cars per day. This FESOP will also enable them to acquire more flexibility regarding what materials can be cleaned out of the railcars.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively incomplete FESOP application for the purposes of this review was received on September 20, 2001. Additional information received during the month of January, 2002 makes the FESOP application administratively complete.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A of this document for detailed emissions calculations, pages 1 through 5 of Appendix A..

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	less than 25
PM-10	less than 25
SO ₂	less than 25
VOC	greater than 25
CO	less than 25
NO _x	less than 25

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Dichlorobenzene	greater than 10
Ethylene Glycol	greater than 10
Acrylic Acid	greater than 10

Toluene	greater than 10
Xylenes	greater than 10
Methanol	greater than 10
Benzene	greater than 10
Butadiene	greater than 10
Cumene	less than 10
Ethylbenzene	less than 10
Ethylene Glycol	greater than 10
Methanol	greater than 10
Methyl ethyl ketone	greater than 10
Methyl isobutyl ketone	greater than 10
Naphthalene	less than 10
Nitrobenzene	greater than 10
Phenol	less than 10
Styrene	greater than 10
Toluene	greater than 10
Vinyl acetate	less than 10
Glycol Ethers ²	greater than 10
TOTAL	greater than 25

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) GATX Rail Corporation requested the FESOP limitations, therefore, a Part 70 Permit is not required.
- (c) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Federally Enforceable State Operating Permit.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Combined Operations	-	-	-	< 25	<24.3	<7.92	< 10 < 25
TV Threshold	100	100	100	100	100	100	10/25

GATX Rail Corporation has taken a VOC limit of less than twenty five (25) tons per year. This limit will make 326 IAC 8-1-6 not applicable.

GATX Rail Corporation has taken the following Hazardous Air Pollutant (HAP) limits: less than 10 tons per year for a single HAP, and less than 25 tons per year for any combination of HAPs. These limits will make 326 IAC 2-4.1-1 and 2-7 not applicable.

GATX Rail Corporation requested the FESOP limitations, therefore, a Part 70 Permit is not required.

County Attainment Status

The source is located in Vigo County.

Pollutant	Status
PM-10	attainment
SO ₂	maintenance
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Vigo County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Vigo County and the potential to emit of each criteria pollutant is less than one hundred (100) tons per year. The source is not one of the twenty-eight (28) listed sources and its potential to emit PM10 is less than one-hundred (100) tons per year including fugitive emissions, therefore, 326 IAC 2-6 does not apply.

326 IAC 2-4.1-1 (New source toxics control)

The Hazardous Air Pollutants (HAP) shall be limited to less than ten (10) tons per year of any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. This limitation will make 326 IAC 2-4.1-1 not applicable.

326 IAC 2-7 (Part 70 Permit Program)

The Hazardous Air Pollutants (HAP) shall be limited to less than ten (10) tons per year of any single HAP and less than twenty-five (25) tons per year of any combination of HAPs. This limitation will make 326 IAC 2-7 not applicable.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute

averaging period as determined in 326 IAC 5-1-4. GATX Rail Corporation is not subject to 326 IAC 5-1-2(2) because it is not located within a five-tenths kilometer radius circle centered at UTM Coordinates Zone 16 East four hundred sixty-four and fifty-two hundredths kilometers North four thousand three hundred sixty-nine and twenty-one hundredths kilometers.

- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 8-1-6 (new facilities, general reduction requirements)

Pursuant to 326 IAC 8-1-6 all new facilities with potential VOC emissions in excess of 25 tons per year, not subject to some other part of article 8, must install BACT. In order to avoid this requirement GATX Rail Corporation is limited to less than 25 tons of VOC emissions per 12 consecutive months, rolled on a monthly basis.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Conclusion

The operation of this stationary railcar cleaning system shall be subject to the conditions of the attached proposed **(FESOP No.: F167-14957-00130)**.

Appendix A: Emission Calculations

Company Name: GATX Rail Corporation
Address City IN Zip: 4400 Maple Ave, Terre Haute, Indiana 47804
FESOP#: 167-14957
Plt ID: 167-00130
Reviewer: Darren Woodward
Date: May 5, 2002

Flare Operation:

LPG: $(15 \text{ MMBtu/hr})(0.068 \text{ lb/MMBtu})(8760 \text{ hr/yr})(\text{ton}/2000 \text{ lb}) = \mathbf{4.47 \text{ Tons NOx/year}}$

$(15 \text{ MMBtu/hr})(0.37 \text{ lb/MMBtu})(8760 \text{ hr/yr})(\text{ton}/2000 \text{ lb}) = \mathbf{24.3 \text{ Tons CO/year}}$

NH3: $(0.01 \text{ converted to NOx})(4340 \text{ lbs NH}_3/\text{day max. amount flared}) \mathbf{43.4 \text{ lbs. NOx/day}}$
 $\mathbf{= 7.92 \text{ Tons NOx/year}}$

Air Emissions Calculations for Railcar Cleaning Facility
Volatile Organic Compound/Hazardous Air Pollutant Emissions From Residual Commodities

Material	Density (lb/gal)	Weight % Volatile (H ₂ O+Organics)	Weight % Water	Weight % Organics	Volume % Water	Gal/unit	Max Unit/hr	lb VOC/gal (less water)	lb VOC/gal	lb VOC/hr (potential)	lb VOC/day (potential)	tons VOC/yr (potential)
Dichlorobenzene	10.84	100.00%	0.00%	100.00%	0.00%	5	0.5	10.842	10.842	27.105	650.52	118.7199
Ethylene Glycol	9.174	100.00%	0.00%	100.00%	0.00%	5	0.5	9.174	9.174	22.935	550.44	100.4553
Acrylic Acid	8.757	100.00%	0.00%	100.00%	0.00%	5	0.5	8.757	8.757	21.8925	525.42	95.88915
Toluene	7.172	100.00%	0.00%	100.00%	0.00%	5	0.5	7.1724	7.1724	17.931	430.344	78.53778
Xylenes	7.172	100.00%	0.00%	100.00%	0.00%	5	0.5	7.1724	7.1724	17.931	430.344	78.53778
Methanol	6.672	100.00%	0.00%	100.00%	0.00%	5	0.5	6.672	6.672	16.68	400.32	73.0584

The materials cited above are the commodities that would have the highest potential VOC/HAP emissions based upon continuous railcar cleaning of each individual commodity.

All of the above listed materials are 100% HAPs materials. The maximum potential VOC emissions listed above also represent the maximum potential HAP emissions based upon continuous railcar cleaning of each individual commodity.

The emissions from the cleaning of Dichlorobenzene are indicative of the absolute highest VOC and HAP hourly emission rates for the railcar cleaning facility.

Actual VOC and HAP emissions from the railcar cleaning process will be less than 10 tons per year for each individual HAP, less than 25 tons per year for combined HAPs, and less than 25 tons per year for total VOCs. Quantities of railcars and the associated residual commodities cleaned shall be recorded and emission reports shall be submitted as required.

Pounds of VOC/gal (less water) = (Density (lb/gal) x Weight % Organics) / (1 - Volume % Water)
Pounds of VOC/gal = Density (lb/gal) x Weight % Organics
Pounds of VOC/hour = Pounds of VOC/gal (lb/gal) x Gal/unit x Max Unit/hr
Pounds of VOC/day = Pounds of VOC/gal (lb/gal) x Gal/unit x Max Unit/hr x 24 hours/day
Tons of VOC/year = Pounds of VOC/gal (lb/gal) x Gal/unit x Max Unit/hr x (8760 hours/year) x (1 ton/2000 lbs)

**Air Emissions Calculations for Railcar Cleaning Facility
Hazardous Air Pollutant Emissions From Residual Commodities**

Material	HAPs	Density (lb/gal)	Weight % HAPs	Gal/unit	Max Unit/hr	lb HAPs/gal	lb HAPs/hr (potential)	lb HAPs/day (potential)	tons HAPs/yr (potential)
Dichlorobenzene	Dichlorobenzene	10.84	100.00%	5	0.5	10.842	27.105	650.52	118.7199
Ethylene Glycol	Ethylene Glycol	9.174	100.00%	5	0.5	9.174	22.935	550.44	100.4553
Acrylic Acid	Acrylic Acid	8.757	100.00%	5	0.5	8.757	21.8925	525.42	95.88915
Toluene	Toluene	7.172	100.00%	5	0.5	7.1724	17.931	430.344	78.53778
Xylenes	Xylenes	7.172	100.00%	5	0.5	7.1724	17.931	430.344	78.53778
Methanol	Methanol	6.672	100.00%	5	0.5	6.672	16.68	400.32	73.0584
Aromatic Concentrate	Benzene	7.172	50.00%	5	0.5	3.5862	8.9655	215.172	39.26889
	Toluene	7.172	6.00%	5	0.5	0.430344	1.07586	25.82064	4.7122668
	Styrene	7.172	6.00%	5	0.5	0.430344	1.07586	25.82064	4.7122668
	Ethylbenzene	7.172	1.00%	5	0.5	0.071724	0.17931	4.30344	0.7853778
	Xylenes	7.172	1.00%	5	0.5	0.071724	0.17931	4.30344	0.7853778
Aromatic Hydrocarbons	Ethylbenzene	7.256	3.00%	5	0.5	0.217674	0.54419	13.06044	2.3835303
	Cumene	7.256	1.50%	5	0.5	0.108837	0.27209	6.53022	1.1917652
	Xylenes	7.256	0.50%	5	0.5	0.036279	0.0907	2.17674	0.3972551
Brake Fluid	Glycol Ethers	8.799	65.00%	5	0.5	5.719155	14.2979	343.1493	62.624747
Butyl Phenol	Phenol	7.673	0.10%	5	0.5	0.0076728	0.01918	0.460368	0.0840172
Diesel	Benzene	7.089	0.50%	5	0.5	0.035445	0.08861	2.1267	0.3881228
	Xylenes	7.089	0.20%	5	0.5	0.014178	0.03545	0.85068	0.1552491
Diethylene Glycol Monobutyl Ether	Glycol Ethers	7.906	100.00%	5	0.5	7.90632	19.7658	474.3792	86.574204
Diethylene Glycol Monoethyl Ether	Glycol Ethers	8.257	100.00%	5	0.5	8.2566	20.6415	495.396	90.40977
Ethylene Glycol Monobutyl Ether	Glycol Ethers	7.514	100.00%	5	0.5	7.51434	18.7859	450.8604	82.282023
Gasoline Antioxidant / Additive	Benzene	7.423	0.01%	5	0.5	0.00074226	0.00186	0.044536	0.0081277
	Cumene	7.423	0.01%	5	0.5	0.00074226	0.00186	0.044536	0.0081277
Glycol Ethers	Glycol Ethers	8.257	100.00%	5	0.5	8.2566	20.6415	495.396	90.40977
Kerosene	Benzene	6.714	0.02%	5	0.5	0.00134274	0.00336	0.080564	0.014703
	Ethylbenzene	6.714	0.10%	5	0.5	0.0067137	0.01678	0.402822	0.073515
	Napthalene	6.714	0.64%	5	0.5	0.04296768	0.10742	2.578061	0.4704961
	Toluene	6.714	0.18%	5	0.5	0.01208466	0.03021	0.72508	0.132327
	Xylenes	6.714	0.65%	5	0.5	0.04363905	0.1091	2.618343	0.4778476
Methyl Isobutyl Ketone	Methyl Isobutyl Ketone	6.705	100.00%	5	0.5	6.70536	16.7634	402.3216	73.423692
Mineral Spirits	Benzene	6.505	0.09%	5	0.5	0.00585468	0.01464	0.351281	0.0641087
	Cumene	6.505	0.00%	5	0.5	0.000065052	0.00016	0.003903	0.0007123
Mononitrobenzene	Nitrobenzene	9.925	100.00%	5	0.5	9.9246	24.8115	595.476	108.67437
Petroleum Crude Oil	Benzene	7.089	0.10%	5	0.5	0.007089	0.01772	0.42534	0.0776246
Petroleum Distillate	Napthalene	7.506	1.00%	5	0.5	0.07506	0.18765	4.5036	0.821907
	Styrene	7.506	1.00%	5	0.5	0.07506	0.18765	4.5036	0.821907
	Xylenes	7.506	0.20%	5	0.5	0.015012	0.03753	0.90072	0.1643814
Printing Ink	Toluene	7.506	1.00%	5	0.5	0.07506	0.18765	4.5036	0.821907
	Xylenes	7.506	1.00%	5	0.5	0.07506	0.18765	4.5036	0.821907
Resin Plasticizer	Styrene	7.673	33.00%	5	0.5	2.532024	6.33006	151.9214	27.725663
Solvents	Methyl Ethyl Ketone	7.423	30.00%	5	0.5	2.22678	5.56695	133.6068	24.383241
	Methyl Isobutyl Ketone	7.423	10.00%	5	0.5	0.74226	1.85565	44.5356	8.127747
	Toluene	7.423	12.00%	5	0.5	0.890712	2.22678	53.44272	9.7532964
	Xylenes	7.423	10.00%	5	0.5	0.74226	1.85565	44.5356	8.127747
Styrene-Butadiene Latex Water	Styrene	8.173	0.80%	5	0.5	0.0653856	0.16346	3.923136	0.7159723
	Butadiene	8.173	0.01%	5	0.5	0.00040866	0.00102	0.02452	0.0044748
Vinyl Acetate Water Emulsion	Vinyl Acetate	8.34	0.50%	5	0.5	0.0417	0.10425	2.502	0.456615
Waste Oil	Benzene	7.089	0.10%	5	0.5	0.007089	0.01772	0.42534	0.0776246

The calculations cited above based upon continuous railcar cleaning of each individual commodity.

Actual VOC and HAP emissions from the railcar cleaning process will be less than 10 tons per year for each individual HAP, less than 25 tons per year for combined HAPs, and less than 25 tons per year for total VOCs. Quantities of railcars and the associated residual commodities cleaned shall be recorded and emission reports shall be submitted as required.

Pounds of VOC/gal = Density (lb/gal) x Weight % Organics

Pounds of VOC/hour = Pounds of VOC/gal (lb/gal) x Gal/unit x Max Unit/hr

Pounds of VOC/day = Pounds of VOC/gal (lb/gal) x Gal/unit x Max Unit/hr x 24 hours/day

Tons of VOC/year = Pounds of VOC/gal (lb/gal) x Gal/unit x Max Unit/hr x (8760 hours/year) x (1 ton/2000 lbs)

Air Emissions Calculations for Railcar Cleaning Facility
Air Pollutant Emissions From Flaring Operation
Empty Railcar with Butadiene Vapors

Railcar Volume (gal)	Railcar Volume (ft ³)	Volume of Liquid Butadiene in Railcar (gal)	Volume of Liquid Butadiene in Railcar (ft ³)	Mass of Liquid Butadiene in Railcar (lb)	Butadiene Pressure in Railcar Before Flaring (psia)	Butadiene Pressure in Railcar After Flaring (psia)	Butadiene Flared (moles)	Mass Butadiene Flared (lb)	Destruction Efficiency (%)	Time Required to Flare each Railcar (hr)	Butadiene Emissions from Flaring	
											(lb/hr)	(tons/yr)
33653	4499.06	0.00	0.00	0.00	114.70	0.594	90.272	4882.8	99.00%	16	3.05177	13.3668

$$\text{Gallons} / 7.48 = \text{ft}^3$$

$$\text{Mass of Liquid Butadiene} = \text{Volume Liquid Butadiene} * 5.18 \text{ lb/gal}$$

$$\text{Butadiene Flared (moles)} = ((\text{Butadiene Pressure Before} - \text{Butadiene Pressure After}) * (\text{Railcar Volume} - \text{Volume Butadiene})) / (10.73 * 530 \text{ R})$$

$$\text{Butadiene Flared (lb)} = \text{Butadiene Flared (moles)} * 54.09, \text{ where } 54.09 \text{ is the molecular weight}$$

$$\text{Butadiene (lb/hr)} = (\text{Mass Butadiene Flared} / \text{Time Required to Flare}) * (100 - \text{Destruction Efficiency})$$

$$\text{Tons per Year} = \text{lb/hr} * ((8760 \text{ hrs/yr}) / (2000 \text{ lb/ton}))$$

Excess Butadiene Emissions from Venting

After flaring a 2% concentration of butadiene remains in the railcar at a pressure of 29.7 psia (0.594 psia butadiene) and is subsequently vented to the atmosphere.

Butadiene Pressure in Railcar After Flaring (psia)	Butadiene Pressure in Railcar After Venting (psia)	Railcar Volume (ft ³)	Volume of Liquid Butadiene in Railcar (ft ³)	Butadiene Vented (moles)	Mass Butadiene Vented (lb)	Time Required to Vent each Railcar (hr)	Butadiene Emissions from Venting	
							(lb/hr)	(tons/yr)
0.594	0.000	4499.064	0.00	0.4699	25.41851	1	25.419	N/A

$$\text{Butadiene Vented (moles)} = (((\text{Butadiene Pressure After Flaring} - \text{Butadiene Pressure After Venting}) * (\text{Railcar Volume} - \text{Volume Butadiene})) / (10.73 * 530 \text{ R}))$$

$$\text{Butadiene Vented (lb)} = \text{Butadiene Vented (moles)} * 54.09, \text{ where } 54.09 \text{ is the molecular weight}$$

$$\text{Butadiene (lb/hr)} = (\text{Mass Butadiene Vented} / \text{Time Required to Vent})$$

N/A = Not Applicable

Table 1 Air Emissions Calculations for Railcar Cleaning Facility
Air Pollutant Emissions From Flaring Operation
Empty Railcar with Liquefied Petroleum Gas Vapors

Railcar Volume (gal)	Railcar Volume (ft ³)	Volume of Liquid LPG in Railcar (gal)	Volume of Liquid LPG in Railcar (ft ³)	Mass of Liquid LPG in Railcar (lb)	LPG Pressure in Railcar Before Flaring (psia)	LPG Pressure in Railcar After Flaring (psia)	LPG Flared (moles)	Mass LPG Flared (lb)	Heat Content of LPG Flared (Btu)	NOx Emissions (lb/hr)	NOx Emissions (tons/yr)	VOC Emissions (lb/hr)	VOC Emissions (tons/yr)	SO ₂ Emissions (lb/hr)	SO ₂ Emissions (tons/yr)	CO Emissions (lb/hr)	CO Emissions (tons/yr)
33653	4499.06	0.00	0.00	0.00	114.70	0.594	90.27	4514	78943230	0.33551	1.46953	0.69075	3.0255	0.03786	0.16583	1.82556	7.995962

Gallons / 7.48 = ft³

Mass of Liquid LPG = Volume Liquid LPG * 4.81 lb/gal

LPG Flared (moles) = ((LPG Pressure Before - LPG Pressure After) * (Railcar Volume - Volume LPG)) / (10.73 x 530 R)

LPG Flared (lb) = LPG Flared (moles) * 50, where 50 is the assumed molecular weight

Heat Content of LPG Flared = LPG Flared (lb) * 17490 Btu/lb

NOx (lb/hr) = (Heat Content LPG / 1000000) * 0.068 / 16 hours, where 0.068 is an emission factor from AP-42, Table 13.5-1

VOC (lb/hr) = (Heat Content LPG / 1000000) * 0.14 / 16 hours, where 0.14 is an emission factor from AP-42, Table 13.5-1

SO₂ (lb/hr) = (0.18 * 0.1 lb SO₂ / 1000 gal LPG) x Railcar Volume / 16 hours is an emission factor from AP-42, Table 1.5-1

CO (lb/hr) = (Heat Content LPG / 1000000) * 0.37 / 16 hours, where 0.37 is an emission factor from AP-42, Table 13.5-1

PM (lb/hr) = (0.4 lb PM / 1000 gal LPG) x Railcar Volume / 16 hours is an emission factor from AP-42, Table 1.5-1

Tons per Year = lb/hr * ((8760 hrs/yr) / (2000lb/ton))

Excess LPG Emissions from Venting

After flaring a 2% concentration of LPG remains in the railcar at a pressure of 29.7 psia (0.594 psia LPG) and is subsequently vented to the atmosphere.

LPG Pressure in Railcar After Flaring (psia)	LPG Pressure in Railcar After Venting (psia)	Railcar Volume (ft ³)	Volume of Liquid LPG in Railcar (ft ³)	LPG Vent (moles)	Mass LPG Vent (lb)	Time Required to Vent each Railcar (hr)	LPG Emissions from Venting (lb/hr)	LPG Emissions from Venting (tons/yr)
0.594	0.000	4499.064	0.00	0.4699	23.49649	1	23.5	N/A

LPG vented (moles) = (((LPG Pressure After Flaring - LPG Pressure After Venting) x (Railcar Volume - Volume LPG)) / (10.73 x 530 R))

LPG Vent (lb) = LPG Vent (moles) * 50, where 50 is the assumed molecular weight

LPG (lb/hr) = (Mass LPG Vent / Time Required to Vent)

N/A = Not Applicable

PM Emissions	
(lb/hr)	(tons/yr)
0.841325	3.685004